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(54) GLOVE PACK



(71) We, ARBROOK, INC., a Corporation organised under the laws of the State of New Jersey, United States of America, of Arlington, Texas, New Jersey, United States of America, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The invention relates to the presentation of medical gloves and more particularly to a glove pack and a method of forming it.

Medical gloves, intended for use in medical examination, as distinct from surgical gloves, are typified by very thin latex gloves having a short cuff at the wrist and usually made in a standard length but in more than one aperture size.

It is desirable to have such gloves presented, normally in pairs, in a conveniently stored and handled and preferably sterile condition, permitting a simple method of donning the gloves while allowing for aseptic donning technique.

It is an object of the invention to fulfil the foregoing purpose in a particularly simple and compact manner.

In a broad aspect the invention provides for confining a medical glove or a pair of medical gloves within folds of a substantially flat wallet formed by transversely folding an elongated (as herein defined) one-piece liner blank, at two transverse fold lines, with the glove or gloves being supported by the blank, the lengthwise direction of the glove(s) being substantially parallel to the lengthwise dimension of the blank, and the wallet being within a sealed envelope or overwrap. By an "elongated" one-piece liner blank, we mean, in the present description and claims, a one-piece liner blank having an overall length which is substantially greater than its overall breadth. Although the invention can be applied to a pack containing a single glove it will be hereinafter described for simplicity and convenience with reference to medical gloves in pairs.

The invention employs a liner blank which is folded with the gloves to form a

wallet. This liner blank is an initially flat sheet element, cut for instance from carton card and provided with creases at desired fold lines in the manner of a carton blank.

A liner blank employed in a glove pack according to the invention: preferably comprises an elongated card subdivided by the two transverse fold lines into three portions, namely a middle portion, a first end portion and a second end portion, the dimensions of the middle and first end portions in the lengthwise direction of the card being approximately equal and the corresponding dimension of the second end portion being less than that of the middle portion, said middle and first end portions, and, if the total longitudinal dimension of the middle and first end portions together is less than the length of the glove(s) retained on the blank, then also the second end portion, each comprising a central panel and a flap attached by a longitudinal fold line to the central panel on each longitudinal side edge and extending along at least part of said edge.

The invention provides a method of forming a medical glove pack wherein the liner blank is as specified in the last preceding paragraph, which comprises: laying at least one glove lengthwise on the liner blank so as to overlie at least the middle and first end portions of the blank; folding the edge flaps over the glove or gloves to retain it or them on the blank; folding the first end portion with the glove or gloves retained thereon, to overlie the middle portion; folding the second end portion with the glove or gloves retained thereon, to overlie the middle portion; folding the second end portion to overlie the other two portions and thus form a substantially flat wallet containing the glove or gloves; wrapping the wallet in an envelope and sealing the envelope.

Normally the pack thus produced will be sterilised by any suitable procedure, such as exposure to gamma radiation, to provide a sterile glove pack ready for use in medical examination. The envelope is typically one adapted to be sealed by heat-sealing, for instance of a closure flap or seam, and made

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of paper which may be coated or otherwise treated to proof it against contamination.

The invention is further described by way of illustration with reference to the accompanying drawings, in which:—

Figure 1. is a plan of a liner blank according to a preferred embodiment of the invention; and

Figure 2 is a plan of a liner blank of another embodiment.

Referring to Figure 1 a liner blank 1 has a middle portion 2 and first end portion 3 of similar size, the total longitudinal dimension of which two portions is at least about as long as a glove, flaps 4, 5, 6, 7 on these portions being wide enough to overlap each other in pairs when folded over the central panels 8, 9, the flaps 4, 5 on the middle portion, however, having cut-away parts 10, 11, to provide an aperture through which a glove within can be observed, and the second end portion 12 having no flaps but constituting a tongue which co-operates with a slit 13 in the central panel 9 of the first end portion to provide means for retaining the wallet in its folded position. Fold lines 15—20 divide the panels and flaps from each other as shown.

This preferred liner blank is formed into a wallet holding a pair of medical gloves as follows. A pair of gloves (not shown) is laid along the central panels 8, 9 of the middle and first end portions of the blank with both wrists together and the fingers pointing towards the first end 14. Flaps 6 and 7 are folded up and over the glove fingers to overlap each other and light pressure on these folded flaps 6, 7 serves to express much of the air from the glove fingers. Flaps 4 and 5 are folded up and over the gloves on the central panel 8 of the middle portion. The first end panel, which supports the glove fingers, with its folded flaps retaining the glove fingers, is next folded up and over the middle portion, which supports the rest of the pair of gloves, with its folded flaps retaining the rest of the pair of gloves, and light pressure expresses air out of the gloves. Second end portion 12, slightly tapered to form a tongue is then folded up and over part of the first end portion and tucked into slit 13 therein to complete the formation of a wallet holding a pair of medical gloves.

The wallet is then wrapped by, or inserted in, a suitable envelope not shown, which is heat-sealed and the whole sterilised as necessary, e.g., by gamma radiation.

The gloves are turned back at the cuffs before being laid on the liner blank so that the gloves may be readily donned by an aseptic technique. The cuff is visible through the aperture left by the flaps 4, 5 so that the intending wearer can immediately identify that end, i.e., the cuff, by which the gloves should be taken from the wallet.

Referring to Figure 2 a liner blank 1 has a middle portion 2, a first end portion 3 of similar size and a second end portion 12, the longitudinal dimension of the second end portion being less than that of the first end portion, and the total longitudinal dimension of the blank being approximately the length of a glove with the cuff turned back. Flaps 4, 5, 6, 7, 21, 22 are provided, as shown, on the central panels 8, 9 and 25 of the respective portions. The flaps 4, 5 in the middle portion extend along most of each side edge 17, 18 of the central panel but the flaps 19, 20, 21, 22 on the end panels 9, 25 extend only along part of the respective side edges of these panels, to allow for insertion of the ends of the blank into the turned back parts of glove cuffs. Fold lines 15—20, 23 and 24 divide the panels and flaps from each other as shown.

This blank is formed into a wallet holding a pair of medical gloves as follows. One glove is laid along the blank with the first end 14 of the blank inserted into the turned back part of the cuff; the blank is turned end for end, e.g., on a jig and another glove is laid along the blank with the second end 26 of the blank inserted likewise into the turned back cuff, the second glove lying over the first and pointing the opposite way. Flaps 4, 5, 6, 7, 21 and 22 are folded up and over the gloves to retain them; the first end panel, which supports the fingers of one glove, with its folded flaps retaining these glove fingers, is folded up and over the middle portion, and the second end portion, which supports the fingers of the other glove, with its folded flaps retaining these over the gloves to retain them; the first end panel of the middle portion to complete the formation of a wallet holding a pair of medical gloves, which is then inserted in an overwrap and sterilised. The gloves can be readily donned without touching their exterior surfaces.

The wallets formed by means of the invention provide a simple and convenient means of segregating pairs of gloves and confining them to the limitations of the overwrap pack used; enabling them to be inserted into available overwrapping machinery to produce neat and practical sterile medical glove packs.

WHAT WE CLAIM IS:—

1. A glove pack comprising one medical glove or a pair of medical gloves confined within folds of a substantially flat wallet formed by transversely folding an elongated (as herein defined) one-piece liner blank, at two transverse fold lines, with the glove or gloves being supported by the blank, the lengthwise direction of the glove(s) being substantially parallel to the lengthwise dimension of the blank, and the wallet being

within a sealed envelope or overwrap.

2. A pack as claimed in Claim 1 wherein the liner blank is made of carton card.

3. A pack as claimed in Claim 1 or 2 wherein the liner blank is an elongated card subdivided by the two transverse fold lines into three portions, namely a middle portion, a first end portion and a second end portion; the dimensions of the middle and first end portions in the lengthwise direction of the card being approximately equal and the corresponding dimension of the second end portion being less than that of the middle portion; said middle and first end portions, and, if the total longitudinal dimension of the middle and first end portions together is less than the length of the glove(s) retained on the blank, then also the second end portion, each comprising a central panel and a flap attached by a longitudinal fold line to the central panel on each longitudinal side edge and extending along at least part of said edge.

4. A glove pack substantially as described and shown in the accompanying drawings.

5. A glove pack as claimed in any preceding Claim which has been sterilised.

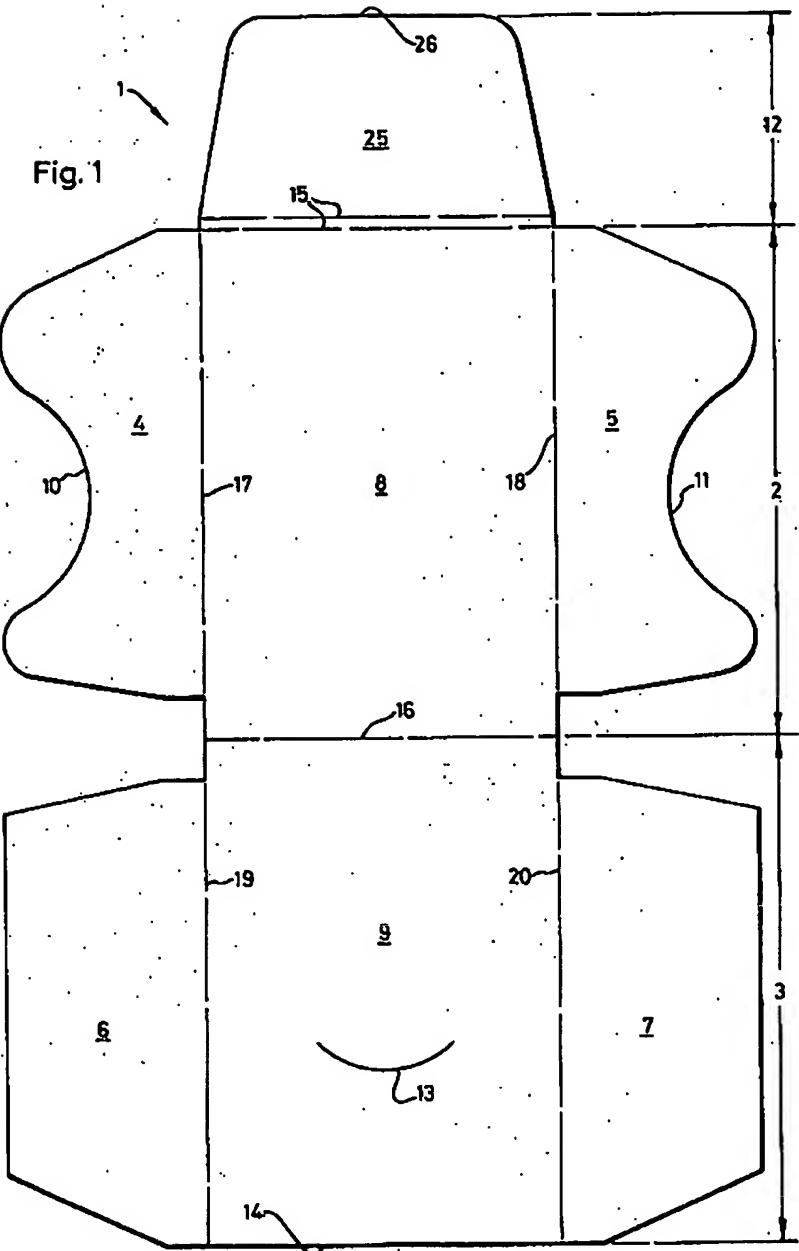
6. A method of forming a medical glove pack as claimed in Claim 3, which comprises: laying at least one glove lengthwise on the liner blank so as to overlie at least the middle and first end portions of the blank; folding the edge flaps over the glove or gloves to retain it or them on the blank; folding the first end portion with the glove or gloves retained thereon, to overlie the middle portion; folding the second end portion with the glove or gloves retained thereon, to overlie the middle portion; folding the second end portion to overlie the other two portions and thus form a substantially flat wallet containing the glove or gloves; wrapping the wallet in an envelope and sealing the envelope.

7. A method of forming a glove pack substantially as described with reference to the accompanying drawings.

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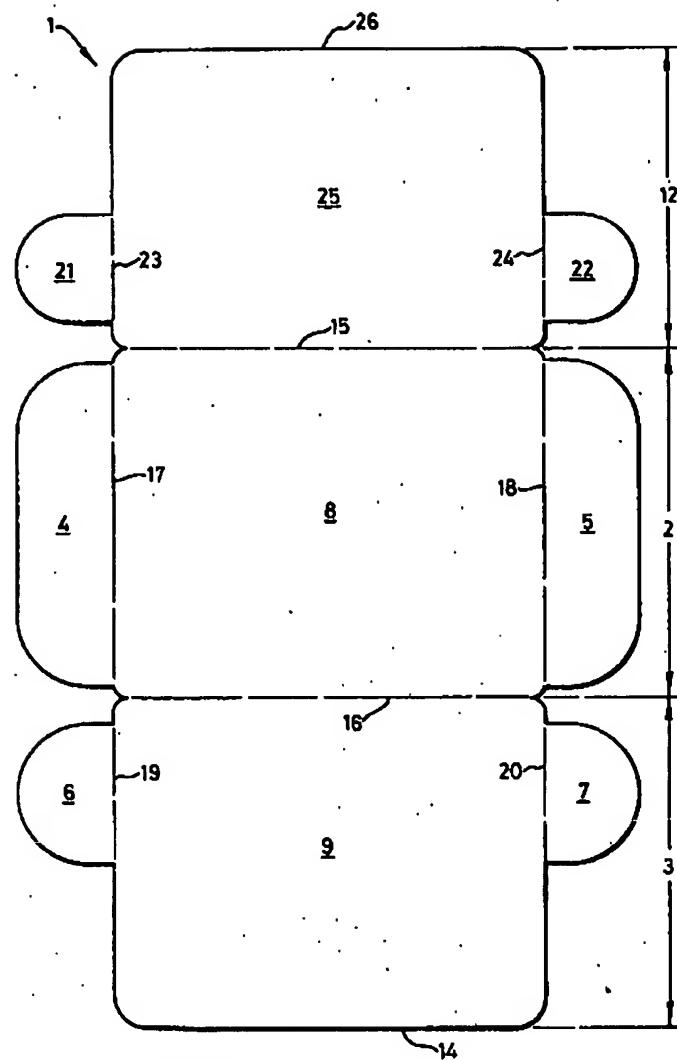


Fig. 2